7	Changed a lile from non-ASCII to ASCII ENTER For hor by: (STIC sta
٦. ا	Changed the margins in cases where the sequence text was "wrapped" down to the next line.
]	Edited a format error in the Current Application Data section, specifically:
)	Edited the Current Application Oata section with the actual current number. The number inputted by the applicant was the pnor application data; or other
T	Added the mandatory heading and subheadings for "Current Application Data".
ך ר	Edited the 'Number of Sequences' field. The applicant spelled out a number instead of using an integer.
] .	Changed the spelling of a mandatory field (the headings or subheadings), specifically:
<u> </u>	Corrected the SEO ID NO when obviously incorrect. The sequence numbers that were edited were:
]	Inserted or corrected a nucleic number at the end of a nucleic tine. SEO ID NO's edited:
)	Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place.
)	Inserted colons after headings/subheadings. Headings edited included: •
	Deletedextra invalid, headings used by an applicant, specifically:
]	Deletod: non-ASCII *garbago* at the beginning/end of tiles: secretary initials/filename at end of file page numbers throughout text: other invalid text, such as
	Inserted mandatory headings, specifically:
	Corrected an obvious erro: in the response, specifically:
	Edited identifiers where upper case is used but lower case is required, or vice versa.
	Corrected an error in the Number of Sequences field, specifically:
	A "Hard Pago Break" code was inserted by the applicant. All occurrences had to be deleted.
	Deloted ending stop codon in amino acid sequences and adjusted the *(A)Length: field accordingly (error due to a Patentin bug). Sequences corrected:
]	Other:
· · ·	
100	r: The above corrections must be communicated to the applicant in the first Office 31/95

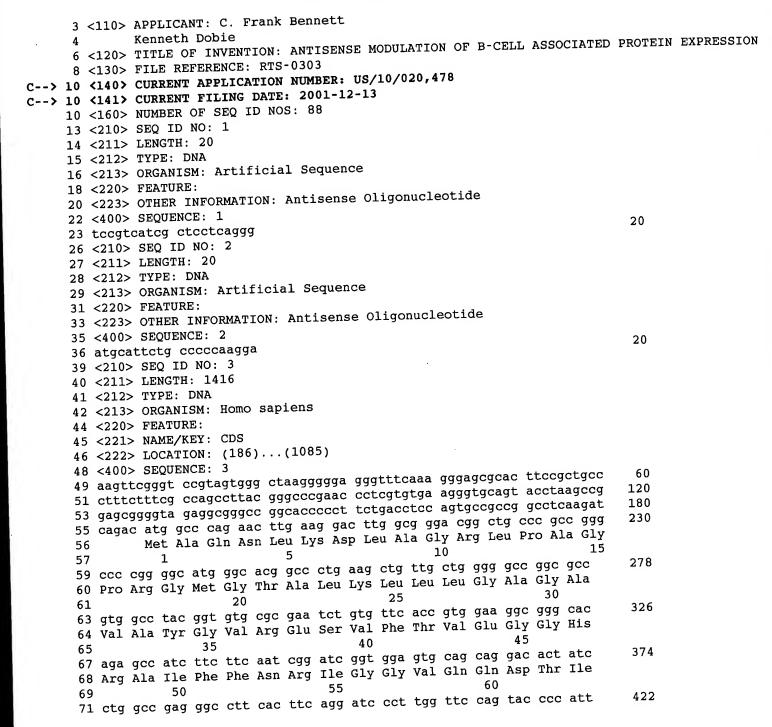
OIPE

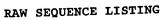
RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/020,478

DATE: 01/07/2002
TIME: 20:32:06

Input Set : A:\pto.txt

Output Set: N:\CRF3\01072002\J020478.raw





DATE: 01/07/2002 TIME: 20:32:06 PATENT APPLICATION: US/10/020,478

Input Set : A:\pto.txt
Output Set: N:\CRF3\01072002\J020478.raw

72 Leu Ala Glu Gly Leu His Phe Arg Ile Pro Trp Phe Gln Tyr Pro Ile	
70	470
and and aga agt aga at tected tected add yyo	4/0
76 The Tyr Asp Ile Arg Ala Arg Pro Arg Lys IIC Ser 552	
	518
L THE SALE SALE FOR OTH COM OLD LUG CON USE	
80 Ser Lys Asp Leu Gln Met Val Ash Tie Ser Leu Mig 110	
	566
81 100 83 ccc aat gct cag gag ctt cct agc atg tac cag cgc cta ggg ctg gac	
83 ccc aat gct cag gag ctt cct age atg tag cag say	
85 and gag gtg ctc aag agt	614
87 tac gag gaa cga gtg ttg ccg tcc att gtc dat gr ys ser 88 Tyr Glu Glu Arg Val Leu Pro Ser Ile Val Asn Glu Val Leu Lys Ser	
89 130 and the acc car cre acc car cre acc car cre acc car	662
91 gtg gtg gcc aag ttc aat gcc tca cag ctg des dos 35 95 91 92 Val Val Ala Lys Phe Asn Ala Ser Gln Leu Ile Thr Gln Arg Ala Gln	
	710
are are are are and add que add yac co	/10
96 Val Ser Leu Leu Ile Arg Arg Glu Leu III Glu Mig 1125	
	758
The way are day the are the are	
100 Ser Leu Ile Leu Asp Asp Val Ala lie Ini Giu Leu 201	
	806
101 180 180 103 gag tac aca gct gct gta gaa gcc aaa caa gtg gcc cag cag gag gcc 103 gag tac aca gct gct gta gaa gcc aaa caa gtg gcc cag cag gag gcc 104 Glu Tyr Thr Ala Ala Val Glu Ala Lys Gln Val Ala Gln Gln Ala 205	
105 195 the sta gra and gra and gag gaa cag ggg cag	854
107 cag cgg gcc caa ttc ttg gta gaa ddd god day Gln Glu Gln Arg Gln 108 Gln Arg Ala Gln Phe Leu Val Glu Lys Ala Lys Gln Glu Gln Arg Gln	
	000
and and and acc and act acc and att cit aga	902
112 Twe Tle Val Gln Ala Glu Gly Glu Ala Glu Ma	
	950
and and tac atc and CTT CCC ady atc Cyu	,,,,
116 Clu Ala Leu Ser Lys Asn Pro Gly Tyl Tie Lys Leu 115 -	
	998
117 240 245 119 gca gcc cag aat atc tcc aag acg atc gcc aca tca cag aat cgt atc 119 gca gcc cag aat atc tcc aag acg atc gcc aca tca cag aat cgt atc	
120 Ala Ala Gln Asn IIe Ser Lys IIII IIe Ala III 200	
121 200 and other star star star sas star sag gat gas agt tts	1046
123 tat ctc aca gct gac aac ctt gtg ctg dde ctd can sp Shu Ser Phe 124 Tyr Leu Thr Ala Asp Asn Leu Val Leu Asn Leu Gln Asp Glu Ser Phe	
125 275 200 127 acc agg gga agt gac agc ctc atc aag ggt aag aaa tga gcctagtcac	1095
127 acc agg gga agt gat age to let let Lys Gly Lys Lys 128 Thr Arg Gly Ser Asp Ser Leu Ile Lys Gly Lys Lys	
	1155
and the second and th	1155
137 etectedety tyttaadetyy gydetyttygy yddagolysia (caacccagg aatteteaa) 139 eagtyttytt eeeteetea aggetyggag gagataaaca ceaacccagg aatteteaa)	. 1000

DATE: 01/07/2002 RAW SEQUENCE LISTING TIME: 20:32:06 PATENT APPLICATION: US/10/020,478

Input Set : A:\pto.txt
Output Set: N:\CRF3\01072002\J020478.raw

	1416
141 aaattttat tacttaacct g	1410
144 <210> SEQ ID NO: 4	
144 <210> SEQ 15 No. 1 145 <211> LENGTH: 21	
146 <212> TYPE: DNA	
146 (212) 1112. Date of the sequence 147 (213) ORGANISM: Artificial Sequence	
140 /220> FEATURE:	
151 <223> OTHER INFORMATION: PCR Primer	
153 <400> SEQUENCE: 4	21
154 gcaagaaccc tggctacatc a	22
157 <210> SEQ ID NO: 5	
158 <211> LENGTH: 20	
150 /212> TYPE: DNA	
160 <213> ORGANISM: Artificial Sequence	
162 /220> FEATURE:	
164 <223> OTHER INFORMATION: PCR Primer	
166 <400> SEQUENCE: 5	20
167 gtggcgatcg tcttggagat	
170 <210> SEQ ID NO: 6	
171 <211> LENGTH: 24	
172 /2125 TYPE: DNA	
173 <213> ORGANISM: Artificial Sequence	
175 <220> FEATURE:	
177 <223> OTHER INFORMATION: PCR Prode	
179 <400> SEQUENCE: 6	24
180 acttcgcaag attcgagcag ccca	
183 <210> SEQ ID NO: 7	
184 <211> LENGTH: 19	
105 /212> TYPE: DNA	
186 <213> ORGANISM: Artificial Sequence	
188 <220> FEATURE:	
190 <223> OTHER INFORMATION: PCR Primer	
192 <400> SEQUENCE: 7	19
193 gaaggtgaag gtcggagtc	
196 <210> SEQ ID NO: 8	
197 <211> LENGTH: 20	
198 <212> TYPE: DNA	
199 <213> ORGANISM: Artificial Sequence	
201 <220> FEATURE:	
203 <223> OTHER INFORMATION: PCR Primer	
205 <400> SEQUENCE: 8	20
206 gaagatggtg atgggatttc	
209 <210> SEQ ID NO: 9	
210 <211> LENGTH: 20	
211 <212> TYPE: DNA 212 <213> ORGANISM: Artificial Sequence	
212 <213> UNGANISM. ALCITICATE BOSTON	
214 <220> FEATURE: 216 <223> OTHER INFORMATION: PCR Probe	
216 <223> OTHER INFORMATION. FOR 12000 218 <400> SEQUENCE: 9	
218 <400> SEQUENCE: 9 219 caagetteec gtteteagee	20
219 CadyCllCCC gccccoages	

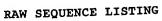
RAW SEQUENCE LISTING PATENT APPLICATION: US/10/020,478

DATE: 01/07/2002 TIME: 20:32:07

Input Set : A:\pto.txt

Output Set: N:\CRF3\01072002\J020478.raw

222 <210> SEQ ID NO: 10 223 <211> LENGTH: 6000 224 <212> TYPE: DNA 225 <213> ORGANISM: Homo sapiens 227 <220> FEATURE: 229 <221> NAME/KEY: intron 230 <222> LOCATION: (576)...(711) 231 <223> OTHER INFORMATION: intron 1 W--> 233 <221> NAME/KEY: exon:intron junction 234 <222> LOCATION: (796)...(797) 235 <223> OTHER INFORMATION: exon 2:intron 2 W--> 237 <221> NAME/KEY: intron:exon junction 238 <222> LOCATION: (1414)...(1415) 239 <223> OTHER INFORMATION: intron 2:exon 3 W--> 241 <221> NAME/KEY: exon:intron junction 242 <222> LOCATION: (1494)...(1495) 243 <223> OTHER INFORMATION: exon 3:intron 3 245 <221> NAME/KEY: intron 246 <222> LOCATION: (1495)...(2396) 247 <223> OTHER INFORMATION: intron 3 249 <221> NAME/KEY: exon 250 <222> LOCATION: (3213)...(3316) 251 <223> OTHER INFORMATION: exon 6 W--> 253 <221> NAME/KEY: exon:intron junction 254 <222> LOCATION: (3316)...(3317) 255 <223> OTHER INFORMATION: exon 6:intron 6 257 <221> NAME/KEY: intron 258 <222> LOCATION: (3317)...(3743) 259 <223> OTHER INFORMATION: intron 6 W--> 261 <221> NAME/KEY: intron:exon junction 262 <222> LOCATION: (5075)...(5076) 263 <223> OTHER INFORMATION: intron 8:exon 9 265 <400> SEQUENCE: 10 266 toccagtoot gtgcctgctc cocaccgctt cgttcacgag gcttgaatcc atcactgggc 60 268 gcggccatct tgcaacaata ccggaagttg cgctaacgct cttaaataag aacagcgcgg 120 270 cttctaatca caaatttcct tccggctgcc attttgaaag tgggccagga aatggagatg 180 272 acttgctgtc ttgcgctgcc ctccctggga gggcagcctt ccagaaaggg gcgggacttc 240 274 cgtatgcgcg attectgtgc gcgaagttcg ggtccgtagt gggctaaggg ggagggtttc 276 aaagggageg cactteeget geeetttett tegeeageet taegggeeeg aaccetegtg 360 278 tgaagggtgc agtacctaag ccggagcggg gtagaggcgg gccggcaccc ccttctgacc 420 280 tocagtgccg ccggcctcaa gatcagacat ggcccagaac ttgaaggact tggcgggacg 480 282 gctgcccgcc gggccccggg gcatgggcac ggccctgaag ctgttgctgg gggccggcgc 540 284 cgtggcctac ggtgtgcgcg aatctgtgtt caccggtgag caacctccgc ctgctcgccg 600 286 gacgetteca gteecteece caaacceett geeetgteee egegeeete caegggeeta 660 288 gcattteete tgageagegg cetggeetga teaceaecea teteceeaea gtggaaggeg 720 290 ggcacagage catettette aateggateg gtggagtgca geaggaeact ateetggeeg 780 292 agggccttca cttcaggtaa tggcgggcag agcctgctga ccctgacctt tcacccttga 840 294 cgccgaccca gcagtggcta tagtcggacg tgcaacagga ttcaacgctg ctcttttccc 900 296 accetectea tecetgeece taggatagtg ggtgetgega gaacetecag cagcatacaa 960



DATE: 01/07/2002 TIME: 20:32:07 PATENT APPLICATION: US/10/020,478

Input Set : A:\pto.txt
Output Set: N:\CRF3\01072002\J020478.raw

-	L020
	L080
298 actgttgttt tecagaggga caagagaate teteeteges sysysosia ggeetttet 1 300 ggeeaaaaaa egegtggtga ggggaaaceg ggeaaggeta gtgaaactge ggeetttet 1	L140
300 ggccaaaaaa cgcgtggtga ggggaaaccg ggtaaggcaa gctggagtgc agtggcgcga 1 302 ttttttttt ttggagaggg agtcttgctc tgtcgcccag gctggagtgc agtggcgcga 1 302 ttttttttt ttggagaggg agtcttgctca tttcaaggga ttctcctgcc tcagcctcac 1	1200
302 ttttttttt ttggagaggg agtcttgete tgtegeeeds selfstall teageeteae 1 304 teteggetea etgeaacete egeeteetga ttteaagega tteteetgee teageeteae 1	1260
304 teteggetea etgeaacete egeeteetga teteaagega essentityta tettagtaga 1 306 gagtagetgg gattacagge geeegeeace aegeeegget aattittgta tettagtaga 1	1320
306 gagtagetgg gattacagge geeegeeace acgeeeggee and a same atgateegee 1 308 gaeggggttt cactatgtag atcaagetgg tetegaacte etgaceteaa atgateegee 1 308 gaegggggttt cactatgtag atcaagetgg tetegaacte etgaceteaa atgateegee 1 308 gaeggggggggggggggggggggggggggggggggggg	1380
308 gacggggttt cactatgtag atcaagetgg tetegated togate 310 cgcctcggcc teccaaagtg etgggattac aggcgtgage caccgcgccc ggccgaaact 310 cgcctcggcc teccaaagtg etgggattac aggcgtgage teccaagta taccccatta	1440
310 egecteggee teccaaagtg etgggattat aggegtgas talegeteag talegeatta 312 gtggeetett aatacetate eetgteetet eeaggateee ttggtteeag talegeatta 312 gtggeetet aatacetate eetgeteete telegeteege taleggetee aaaggtaggt	1500
312 gtggcctctt aatacctate cetgteetet coaggadoo 1753 314 tetatgacat tegggecaga cetegaaaaa teteeteece tacaggetee aaaggtaggt 3 314 tetatgacat tegggecaga eetegaaaaa teteeteece tacaggetee aaaggtaggt	1560
314 totatgacat togggocaga cotogadada totocotoga stagotggoa agaaacccca 316 otgagoactt ggtaatcaca tggcaggtgg gatgatcaag gtagotggoa agaaacccca 316 otgagoactt ggtaatcaca tggcaggtgg ctotttocac atotgcaaga gotgtaacaa	1620
316 ctgagcactt ggtaatcaca tggcaggtgg gatgatcadg godgtaacaa 318 ggggaatatg gtagtgtcag gcctttaggc ctctttccac atctgcaaga gctgtaacaa 318 ggggaatatg gtagtgtcag gcctttaggc agattctgaac acactgtgtt tgcgtgcttt	1680
318 ggggaatatg gtagtgtcag gccttlagge electrodae acactgtgtt tgcgtgcttt 320 aaatacctgc ctcctggggt caaagcagca aattctgaac acactgtgtt tgcgtgcttt	1740
320 aaatacetge eteetggggt caaageagea aatteegade about 322 ttactgtete eteectgacg tgtatteaat aagagtattg tttgteecte gtettgttea 322 ttactgtete eteectgacg tgtatteaat atttttttet aactgettga ettactatat	1800
322 ttactgtctc ctccctgacg tgtattcaat adgagtatos to 324 ctgcctagat caaagctttg ttttaaagcc ttttttttct aactgcttga cttactatat 324 ctgcctagat caaagctttg tctgatgagaagt ttgtccctaa gcttgactag	1860
324 ctgcctagat caaagctttg ttttaaagcc tttttacccca autoccctaa gcttgactag 326 ctacagttac atccactagt acactctgtt ctggagaagt ttgtccctaa gcttgactag 326 ctacagttac atccactagt acactctgtt ctgagagaggt gcctttgagt tccccagacc	1920
326 ctacagttac atccactagt acactetytt etgyggatage togettyagt tececagace 328 tteacetytt eteteettet agaccataca taaaageegt geetttgagt teecetytaae	1980
328 ttcacctgtt ctctccttct agaccataca taladageege yeers 330 tcttcctcct ccccacccac gcacacatat acaccetggg tcaggtaget cacctgtaac 330 tcttcctcct ccccacccac gcacacatat acaccetggg tcaggtage ttattcattt actagactgg	2040
330 tetteeteet ceceaceae geacacatat actacectysy constitution actagactyg 332 etgtaatgta ettettgtg etatacetag tgeaggtege ttatteattt actagactgg attettgtce eccaagteet tacaggagae	2100
332 ctgtaatgta cttctttgtg ctatacctag tgtaggeogo contagged tacaggagac 334 gccctgggaa taaaagattc attaaacaca attcttgtcc cccaagtcct tacaggagac	2160
334 gccctgggaa taaaagattc attaaacaca attcctgtoo oo agaggggga 336 atgattacgg tacagcacga aagcgcccac gttagaggtt gcacagagta cagaggggga	2220
336 atgattacgg tacagcacga aagcgcccac gttagagget southing agggtgagg 338 aagagtagtc agctctgctg gtgacggggt ttgcagttca aggcttcaca gtgggtgagg	2280
338 aagagtagte agetetgetg gtgaeggggt tegeagetad aggagtaact etecteecee 340 gtgeatttea getgtgetge gtettgtett cettgteage etgattaact etecteecee 340 gtgeatttea getgtgetge gtettgtett eetgteage agggaggaac atgaaggaga	2340
340 gtgcatttca gctgtgctgc gtcttgtctt ccttgtcatgc agggaggaac atgaaggaga 342 cagggtagtg ccaggctgta caccattgca cagggcactg ctgacctcaa tctcagacct	2400
342 cagggtagtg ccaggctgta caccattgca caggcactg ctgacctcaa tctcagacct 344 aaatgcttgg gaaagggtgt ttggccttga ccagccactg ctgacctcaag agcttcctag	2460
344 aaatgcttgg gaaagggtgt ttggccttga ctagccacty tryangles agcttcctag 346 acagatggtg aatatctccc tgcgagtgtt gtctcgaccc aatgctcagg agcttcctag 346 acagatggtg tagccgagtgt ttgccgtcca ttgtcaacga	2520
346 acagatggtg aatatotooc tgcgagtgtt gccccgacoo atagatgacacga ttgtcaacga 348 catgtaccag cgcctagggc tggactacga ggaacgagtg ttgccgtcacac agcgggccca	2580
348 catgtaccag cgcctagggc tggactacga ggaacgagtg taggocga ctgatcaccc agcgggccca 350 ggtgctcaag agtgtggtgg ccaagttcaa tgcctcacag ctgatcaccc agcgggccca	2640
350 ggtgctcaag agtgtggtgg ccaagttcaa tycetcadag objects ccaagagtatt 352 ggtctgactc ccaccaccat ctgcgtggtg tcagcctttc cttcctaggc ccagagtatt	2700
352 ggtctgactc ccaccaccat ctgcgtggtg tcagcctco oddoory, 352 ggtctgactc ccaccaccat ctgcgtggtg tcagcctcc cctagtgcca tttccaccta 354 gggaattagg aaaggcagct tattagaaaa gcattgtcac cctagtgcca tttccaccta	2760
354 gggaattagg aaaggcagct tattagaada gcattgcag cattagaact cgatagcact 356 aaagctgtgc taattgccac tgtgaaataa ggagagccag cattagaact cgatagcact	2820
356 aaagctgtgc taattgccac tgtgaaataa ggagagcta aagcatgca cctcttcgag 358 cggtgttagg aagcacagag gaaaatggcc aagtcttggc ttttcctgca cctcttcgag	2880
358 cggtgttagg aagcacagag gaaaatggce aagtetegge dately 360 cagagagget tatgttacag gtttgcctga caggaageta aggcagtgca tgttgtattg 360 cagagagget tatgttacag gtttgcctga caggagetec ccagtcccct caaaccacce	2940
360 cagagagget tatgitacag gittigeetya caggadyota ayyong saaccacce 362 agagtgaagg gittaggggte geaaccitee titteagetee ceagteeeet caaaccacce gagagtgaea	3000
	3060
364 ctcccttccc ctcttcaccc ctgccctcag gtdccoody coatcacaga gctgagcttt 366 gagagggcca aggacttcag cctcatcctg gatgatgtgg ccatcacaga gctgagctgtg	3120
366 gagagggcca aggacttcag celeatecty gatgatges, gagaggegea agagecgtgg 368 agecgagagt acacagetge tgtagaagee aaacaagtgg gtgagtegea agagecgtgg 368 agecgagagt acacagetge tgtagaagee aagactecat gggtgggget cetgaeecag	3180
	3240
370 ggtgaggget tetgagatge aggaggagga adgaecageag gaggeecage gggeecaatt 372 gaeagggtet eeetgaetet eteceaceae ageecageag gaggeecage agggtgagge	3300
372 gacagggtct ccctgactct etcccaccac agccoagat gtgcaggccg agggtgaggc 374 cttggtagaa aaagcaaagc aggaacagcg gcagaatctc agcccagccc	3360
	3420
376 cgaggetgee aagatgatat cettergeeg gagagaet aaggegaatg cgaeteegtg 378 tgagtteece atteteette atgggeagge tgatgagaet aaggegaate gaaatettag	3480
	3540
	3600
	3660
	3720
390 gcgtgtacct taaccctcct caccttggag tageactggg ggtgagtgtg tcagcccagc 392 aacttcgcaa gattcgagca gcccagaata tctccaagac ggtgagtgtg tcagcccagc	3900
392 aacttegeaa gattegagea geeeagaata teteedagaa 3355 355 355 355 355 355 355 355 355	
-	

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/020,478

DATE: 01/07/2002 TIME: 20:32:08

Input Set : A:\pto.txt

Output Set: N:\CRF3\01072002\J020478.raw

L:10 M:270 C: Current Application Number differs, Replaced Current Application No

L:10 M:271 C: Current Filing Date differs, Replaced Current Filing Date

L:233 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:10 L:237 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:10

L:241 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:10

L:253 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:10

L:261 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:10